

QUICK LAYER-3 MESSAGE MULTIPLEXING

ABSTRACT OF THE DISCLOSURE

A technique for implementing a flattened Layer 3 stack model within a Global System for Mobile (GSM) communication system so that a centralized multiplex function associated with certain functions handles messages. The multiplex function dispatches radio resource (RR), mobility management (MM), or Connection Management (CM) function messages directly to the respective functional layers without first requiring such messages to pass through a stack. In the preferred arrangement, the multiplex function sub-L3 handles only uplink messages, allowing downlink messages to travel through the sub-layer stack without employing any bridging entity. The multiplex function can run independently of any of the other functions in Layer 3 or can be implemented as part of the message passing part of the Layer 2 running body so that the Layer 2 messages are routed directly to a respective RR, MM, or CM function. The flattened protocol stack permits time-sensitive messages related to location update, handover, or cell reselection and other time-critical messages to be handled more efficiently.

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